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130 mil  
4.942

A method for making a golf ball comprising the steps of:

forming a plurality of protrusion depressions on an inner surface of a mold, the protrusion depressions having a width of from about 0.09 to about 0.18 inches and a depth of about 0.02 to about 0.06 inches;

90 mil / 2.28 mm

20 mil

molding a center assembly having a plurality of outwardly extending protrusions from the mold; and

molding a cover about the center assembly having the plurality of outwardly extending protrusions to thereby obtain a golf ball.

2. A method according to claim 1, wherein the step of molding the center assembly is performed by utilizing two molds each defining a concave molding surface having a plurality of protrusion depressions on the molding surfaces.

3. A method according to claim 1, wherein the step of molding the center assembly is performed by a compression molding operation at a temperature of from about 290°F to about 330°F, under a pressure of about 100 to about 500 psi.

4. A method according to claim 1, wherein the plurality of protrusion depressions are selected from the group consisting of convex, angled, and stepped.

5. A method according to claim 1, wherein the step of forming the plurality of protrusion depressions is performed by a technique selected from the group consisting of drilling, end milling, grinding with a cutting tool, and using an electrical discharge machine.

6. A method according to claim 1, wherein the step of molding the cover about the center assembly includes a first operation of molding an inner cover layer about the center assembly and a second operation of molding an outer cover layer about the inner cover layer.

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7. A method for making a golf ball comprising the steps of:  
molding a spherical center;  
forming a plurality of protrusion depressions on a mold adapted to receive the spherical center, the protrusion depressions each having a width of about 0.09 to about 0.18 inches and a depth of about 0.02 inches to about 0.06 inches;  
positioning the spherical center within the mold having the plurality of protrusion depressions;  
molding a mantle layer about the spherical center in the mold to form a center assembly having a plurality of outwardly extending protrusions; and  
molding a cover layer about the mantle layer.
8. A method according to claim 7, wherein the step of molding the mantle layer is performed by injection molding at a temperature of from about 200°F to about 400°F for about 2 to 10 minutes.
9. A method according to claim 7, wherein the plurality of protrusion depressions have a configuration selected from the group consisting of convex, angled, and stepped.
10. A method according to claim 7, wherein the step of forming the plurality of protrusion depressions is performed by a technique selected from the group consisting of drilling, end milling, grinding with a cutting tool, and utilizing an electrical discharge machine.
11. A method according to claim 7, wherein the step of molding the cover about the mantle layer includes an operation of molding a first cover layer about the mantle layer and an operation of molding a second cover layer about the first cover layer.
12. A method for making a multi-layered golf ball comprising the steps of:

5 forming a plurality of protrusion depressions on an inner surface of a mold, each of the protrusion depressions having a depth of from about 0.02 to about 0.06 inches;

producing a center assembly having a plurality of outwardly extending protrusions from the mold;

forming a mantle layer about the center assembly having the outwardly extending protrusions; and

10 producing a cover about the mantle layer to thereby obtain a golf ball.

13. A method according to claim 12, wherein the center assembly is produced by utilizing two molds each defining a concave molding surface having a plurality of protrusion depressions on the molding surfaces.

14. A method according to claim 12, wherein the center assembly is produced by a compression molding operation utilizing a temperature of from about 290°F to about 330°F.

15. A method according to claim 12, wherein the plurality of protrusion depressions are selected from the group consisting of convex, angled, and stepped.

16. A method according to claim 12, wherein the plurality of protrusion depressions are formed by a technique selected from the group consisting of drilling, end milling, grinding with a cutting tool, and using an electrical discharge machine.

17. A method according to claim 12, wherein the cover is produced by forming a first inner cover layer about the mantle layer and then forming a second outer cover layer about the first inner cover layer.

18. A method for making a golf ball comprising the steps of:

- molding a spherical center;
- forming a plurality of protrusion depressions on a mold adapted to receive the spherical center, each of the protrusion depressions having a width of from about 0.09 to about 0.18 inches;
- 5 positioning the spherical center within the mold having the plurality of protrusion depressions;
- molding a mantle layer about the spherical center in the mold having the plurality of protrusion depressions to form a center assembly having a plurality of outwardly extending protrusions;
- 10 molding an intermediate layer about the center assembly having the outwardly extending protrusions; and
- molding a cover about the intermediate layer to thereby obtain a golf ball.

19. A method according to claim 18, wherein the step of molding the mantle layer is performed by utilizing two molds each defining a concave molding surface having a plurality of protrusion depressions on the molding surfaces.

20. A method according to claim 18, wherein the center assembly is compression molded utilizing a temperature of from about 290°F to about 330°F.

21. A method according to claim 18, wherein the plurality of protrusion depressions are selected from the group consisting of convex, angled, and stepped.

22. A method according to claim 18, wherein the plurality of protrusion depressions are formed by a technique selected from the group consisting of drilling, end milling, grinding with a cutting tool, and using an electrical discharge machine.

23. A method according to claim 18, wherein the step of molding the cover is performed by molding a first cover layer about the intermediate layer and

further molding a second cover layer about the first cover layer.

24. A method for forming a golf ball comprising the steps of:
- providing a first die defining a first hemispherical molding surface;
  - providing a second die defining a second hemispherical molding surface, the second die adapted to engage with the first die such that the first
  - 5 hemispherical molding surface and second hemispherical molding surface align with each other to form a spherical molding surface adapted to form a golf ball component;
  - machining a plurality of protrusion depressions in each of the first die and second die to thereby form first and second machined dies, wherein each
  - 10 of the protrusion depressions have a width of from about 0.09 inches to about 0.18 inches and a depth of from about 0.02 inches to about 0.06 inches;
  - positioning the first and second machined dies together to form a generally spherical molding cavity defining the plurality of protrusion depressions machined therein;
  - 15 molding a golf ball center assembly in the generally spherical molding cavity; and
  - forming a cover layer about the golf ball center assembly to thereby produce a golf ball.

25. The method of claim 24 wherein the molding operation is performed by a compression molding technique at a temperature of from about 290°F to about 330°F under a pressure of about 100 psi to about 500 psi.

26. The method of claim 24 wherein the molding operation is performed by an injection molding technique at a temperature of from about 200°F to about 400°F for about 2 to about 10 minutes.